

a filter coupled to the multicarrier-signal generator, the filter capable of isolating at least one of the information-modulated frequency modes.

23. A method of communicating including:

- accepting at least one modulation signal,
- generating a modulated multicarrier signal having a plurality of frequencies wherein the at least one modulation signal is modulated onto the multicarrier signal and at least one of the frequencies is within at least one predetermined frequency band.

24. A method of transmitting a multicarrier signal including:

- generating at least one periodic signal having a plurality of incrementally spaced-in-frequency component signals, at least one component-signal frequency being within a desired frequency band, the at least one periodic signal having an amplitude that is a function of an information signal, and
- coupling the periodic signal into a communication channel.

25. A method of transmitting a CIMA signal including:

- generating a plurality of electromagnetic carrier signals having a plurality of frequencies, and
- combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies.

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26. A method of transmitting a CIMA signal including:

- generating a plurality of electromagnetic carrier signals having a plurality of frequencies, each of the carrier signals having an amplitude that is a function of an information signal, and
- combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies, the envelope signal being a function of the information signal.

27. A CIMA transmitter including:

- a signal generator capable of generating a plurality of electromagnetic carrier signals having a plurality of frequencies, and
- a combiner coupled to the signal generator, the combiner capable of combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies.

28. A CIMA transmitter including:

- a signal generator capable of generating a plurality of electromagnetic carrier signals having a plurality of frequencies, each of the carrier signals having an amplitude that is a function of an information signal, and

a combiner coupled to the signal generator, the combiner capable of combining the carrier signals to generate a superposition signal that includes an envelope signal modulating a superposition carrier signal having a superposition carrier frequency that is a function of the carrier signal frequencies, the envelope signal being a function of the information signal.

✓ 29. A multicarrier transmitter including:

- a seed-signal generator capable of generating at least one electromagnetic seed signal having a seed frequency,
- a multicarrier generator coupled to the seed-signal generator, the multicarrier generator capable of receiving the seed signal and a frequency-shift signal having a frequency-shift frequency and generating a plurality of carrier signals having a plurality of carrier frequencies that are sums of the seed frequency plus integer multiples of the frequency-shift frequency, and
- a frequency selector to select at least one of the carrier signals having at least one carrier frequency within at least one predetermined frequency band.

Su D27 ✓ 30. A multicarrier-signal generator including:

- a pulse generator capable of generating a plurality of periodic pulses having a pulse period, the pulses having a frequency spectrum comprising a plurality of incrementally spaced-in-frequency carrier signals, the carrier signals having a uniform frequency spacing between adjacent carrier signals that is a function of the pulse period, and
- a frequency selector coupled to the pulse generator, the frequency selector capable of selecting a plurality of the carrier signals with respect to at least one predetermined frequency band.

✓ 31. A multicarrier-signal generator including:

- a pulse generator capable of generating a plurality of periodic pulses having a pulse period, the pulses having a frequency spectrum comprising a plurality of incrementally spaced-in-frequency carrier signals having a uniform frequency spacing between adjacent carrier signals that is a function of the pulse period, the pulse generator enabled to generate information-modulated pulses wherein the periodic pulses have amplitudes that are a function of the information signal, and
- a frequency selector coupled to the pulse generator, the frequency selector capable of selecting a plurality of the carrier signals with respect to at least one predetermined frequency band.

✓ 32. A method of generating a multicarrier signal including:

- generating a plurality of modulated periodic pulses having a pulse period wherein the unmodulated pulses have a frequency spectrum comprising a plurality of incrementally spaced-in-frequency carrier signals having a uniform frequency spacing between adjacent carrier signals that is a function of the pulse period, the information-modulated pulses having amplitudes that are a function of the information signal, and
- selecting a plurality of the carrier signals with respect to at least one predetermined frequency band.

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